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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/603,134	06/24/2003	John W. Lynn	0119.1 Lynn	9894

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PATENT DEPARTMENT  
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EXAMINER

NGUYEN, TRINH T

ART UNIT	PAPER NUMBER
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3644

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/603,134	LYNN, JOHN W.	
	Examiner	Art Unit	
	Trinh T Nguyen	3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/24/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the phrases "the same time in an otherwise identically-situated bivalve" and "an otherwise identically-situated bivalve" are confusing because it is unclear as to what are being claimed.

In claim 4, the phrase "an otherwise identically-situated bivalve that is not treated in accordance with the recited method" is confusing because it is unclear as to what is being claimed.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 2, 6-11, 13, 14, 16-18, and 21-23 are rejected under 35 U.S.C. 102(a) as being anticipated by Applicant's Admitted Prior Art (as set forth in [0003] to [0026] of the specification; hereinafter is referred to as AAPA).

AAPA discloses a method for maturing and releasing oocytes in a bivalve, said method comprising the sequential steps of: (a) administering to a living, intact bivalve an effective amount of a maturation stimulus comprising exogenous estrogen or an exogenous estrogen agonist; (b) allowing oocytes in the bivalve to mature in response to the maturation stimulus; wherein substantially more oocytes mature than would mature on average in the same time in an otherwise identically-situated bivalve that had not been administered the maturation stimulus; and (c) administering to the bivalve an effective amount of a spawning stimulus; whereby the bivalve releases mature oocytes; wherein substantially more mature oocytes are released than would be released on average by an otherwise identically-situated bivalve that had not been administered the spawning stimulus; wherein the spawning stimulus is selected from the group consisting of exogenous serotonin, an exogenous serotonin agonist, an exogenous serotonin uptake inhibitor, heat shock, sperm extract, or other spawning stimulus. Further note that the sequential order of the steps is an inherent feature within AAPA's method since these steps must be carry out in that order to ensure a proper maturing and releasing of oocytes in bivalves.

For claim 2, AAPA further discloses the bivalve is not killed before the release of oocytes.

For claim 6, AAPA further discloses the matured oocytes are released substantially in synchrony.

For claim 7, AAPA further discloses the bivalve is a triploid.

For claim 8, AAPA further discloses the bivalve is a tetraploid.

For claim 9, AAPA further discloses the bivalve is a female.

For claim 10, AAPA further discloses the bivalve has an indifferent gonad, wherein said method additionally induces the bivalve to develop as a female.

For claim 11, AAPA further discloses the bivalve is a hermaphrodite.

For claim 13, AAPA further discloses the bivalve is *Crassostrea gigas*.

For claim 14, AAPA further discloses the bivalve is *Patinopecten yessoensis*.

For claim 16, AAPA further discloses the maturation stimulus comprises estradiol-17B, and wherein the spawning stimulus comprises serotonin.

For claim 17, AAPA further discloses the spawning stimulus comprises fluvoxamine.

For claim 18, AAPA further discloses the spawning stimulus comprises treatment with heat shock or sperm extract.

For claim 21, AAPA further discloses the spawning stimulus comprises a serotonin agonist.

For claim 22, AAPA further discloses the spawning stimulus comprises a serotonin uptake inhibitor.

For claim 23, AAPA further discloses the maturation stimulus comprises an estradiol-17B agonist.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3-5, 15, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (as set forth in [0003] to [0026] of the specification; hereinafter is referred to as AAPA).

For claims 3 and 5, it would have been obvious to one having ordinary skill in the art at the time the invention was made to allow the bivalve to rest for a time after the release of oocytes and wherein the same method is subsequently applied again to the same bivalve so as to cause a subsequent release of oocytes from the same bivalve during the same breeding season, since it has been held that mere duplication of the essential steps for maturing and releasing oocytes involves only routine skill in the art.

For claim 4, AAPA discloses the claimed invention except for indicating that the subsequent release of oocytes occurs significantly earlier than a subsequent release of oocytes would occur on average in an otherwise identically situated bivalve that is not treated in accordance with the recited method. However, It would have been obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to have modified the method of AAPA so that the subsequent release of oocytes occurs significantly earlier than a subsequent release of oocytes, since it is believe that through trial and error during the experimental process that one comes up with the best result/solution to produce the most oocytes.

For claim 15, AAPA discloses the claimed invention except for indicating that the bivalve to release oocytes outside of the normal breeding season. However, It would have been obvious matter of design choice to one having ordinary skill in the art at the

time the invention was made to have modified the method of AAPA so that the bivalve to release oocytes outside of the normal breeding season, since applicant did not provide a reason and/or showing any criticality as to why the bivalve have to release oocytes outside of the normal breeding season, and it is believe that through trial and error during the experimental process that one comes up with the best result/solution to produce the most oocytes.

For claim 19, AAPA discloses the claimed invention except for indicating the maturation stimulus is administered to the bivalve in a single dose. However, It would have been obvious matter of design choice to one having ordinary skill in the art at the time the invention was made to have modified the method of AAPA so that the maturation stimulus is administered to the bivalve in a single dose, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art, and it is believe that through trial and error during the experimental process that one comes up with the best dose to produce the most oocytes.

For claim 20, it would have been obvious to one having ordinary skill in the art at the time the invention was made to administrate the maturation stimulus to the bivalve in sequential doses over a period of time wherein the sequential doses may be constant or may increase over time, since it has been held that mere duplication of the essential steps for maturing and releasing oocytes involves only routine skill in the art.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (as set forth in [0003] to [0026] of the specification;

hereinafter is referred to as AAPA) in view of WO 96/15662 (hereinafter is referred to as WO'662).

AAPA discloses the claimed invention except for indicating that the bivalve is *Crassostrea virginica*.

WO'662 teaches a similar method as that of AAPA in which WO'662's method uses *Crassostrea virginica*. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method of AAPA so as to include the use of *Crassostrea virginica*, in a similar manner as taught in WO'662, since to do so would merely replace one old and well known bivalve with another old and well known bivalve in order to realize the benefits thereof.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trinh T Nguyen whose telephone number is (703) 306-9082. The examiner can normally be reached on M-F (9:30 A.M to 6:00 P.M).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on (703) 305-7421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Trinh T Nguyen  
Patent Ex.  
Art Unit 3644